



1                   2.       (Once Amended) The device of claim 1, wherein the tubular elongate  
2 member is comprised of a porous synthetic material.

1                   3.       (Once Amended) The device of claim 2, wherein the porous synthetic  
2 material is polytetrafluoroethylene (PTFE), dacron or nylon.


1                   4.       (Once Amended) The device of claim 3, wherein the tubular elongate  
2 member is a vascular graft.


1  5.       (Once Amended) The device of claim 1, wherein the autologous  
2 vascular smooth muscle cells are transduced with a gene encoding erythropoietin.

1  6.       (Twice Amended) The device of claim 1, wherein the autologous  
2 vascular smooth muscle cells are transduced with a gene encoding granulocyte colony  
3 stimulating factor or granulocyte macrophage colony stimulating factor.

1                   7.       (Twice Amended) The device of claim 1, wherein the autologous  
2 vascular smooth muscle cells are transduced with a gene encoding Factor IX.

1                   8.       (Twice Amended) The device of claim 1, wherein the transduced  
2 autologous vascular smooth muscle cells express an anticoagulant.

1  9.       (Once Amended) The device of claim 1, wherein the transduced  
2 autologous vascular smooth muscle cells are immobilized to the tubular elongate member with  
3 a polymer.

1  10.       (Twice Amended) The device of claim 1, wherein the device, prior to  
2 implantation in a subject, further comprises autologous vascular endothelial cells adherent to  
3 an interior surface of the tubular smooth muscle cell complex.

1 11. (Thrice Amended) A method for preparing a vascular graft seeded ex  
2 vivo with vascular smooth muscle cells transduced to express a gene of interest, comprising the  
3 steps of:

4 transducing mammalian vascular smooth muscle cells with the gene of interest  
5 operably linked to a promoter for expression;

6 and immobilizing the transduced vascular smooth muscle cells on a vascular  
7 graft surface, whereby the smooth muscle cells remain stably immobilized on the graft surface  
8 and express a product of said gene, thereby producing said vascular graft having vascular  
9 smooth muscle cells transduced to express a gene of interest.

1 12. (Once Amended) The method of claim 11, wherein the gene encodes  
2 erythropoietin, granulocyte colony stimulating factor, granulocyte macrophage colony  
3 stimulating factor, or Factor IX.

1 13. (Thrice Amended) The method of claim 11, wherein the gene encodes  
2 erythropoietin.

1 14. (Thrice Amended) The method claim 11, wherein the gene encodes  
2 Factor IX.

1 15. (Thrice Amended) The method of claim 11, wherein the gene encodes  
2 granulocyte colony stimulating factor or granulocyte macrophage colony stimulating factor.

1 16. (Thrice Amended) The method of claim 11, wherein the transduced  
2 cells constitutively express an anticoagulant protein.

1 17. (Once Amended) The method of claim 16, wherein the anticoagulant is  
2 a plasminogen activator or antithrombin-III.

1                   18.   (Once Amended) The method of claim 17, wherein the plasminogen  
2 activator is alteplase or urokinase.

1                   19.   (Four Times Amended) The method of claim 11, wherein the gene of  
2 interest encodes insulin or proinsulin polypeptide, and wherein the transduced cells express  
3 insulin or proinsulin polypeptide.

1                   20.   (Thrice Amended) A method for preparing a vascular graft device  
2 seeded ex vivo with vascular smooth muscle cells transduced to express a protein product,  
3 comprising the steps of:  
4                   culturing vascular endothelial cells and vascular smooth muscle cells obtained  
5 from a mammalian subject;  
6                   transducing the smooth muscle cells with a gene which encodes the protein  
7 product, operably linked to a promoter;  
8                   immobilizing on a tubular elongate porous vascular graft device the transduced  
9 smooth muscle cells within the pores and interior surface of the graft device; and  
10 coating the interior of the graft device having immobilized thereon the transduced smooth  
11 muscle cells with the endothelial cells.

1                   21.   (Thrice Amended) The method of claim 20, further comprising the step  
2 of culturing the vascular smooth muscle cells obtained from a mammalian subject in a medium  
3 containing autologous serum prior to immobilizing the cells on the vascular graft device.

1                   22.   (Twice Amended) The method of claim 21, further comprising the step  
2 of culturing the vascular endothelial cells obtained from a mammalian subject in a medium  
3 containing autologous serum prior to coating the vascular graft device.